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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/591,080
Filing Date: June 09, 2000
Appellant(s): GINSBERG ET AL.

Steven C. Sereboff, Reg. No. 37,035

For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 08 July 2004.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

The rejection of claims 1-36 and 38-54 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

6,012,096	LINK	01-2000

6,321,264 FLETCHER et al. 11-2001

Comer, Douglas E. "Internetworking with TCP/IP Principles, Protocols, and Architecture" volume 1, 1995.

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-29, 31-36 and 38-54 were rejected under 35 U.S.C. 103(a) over Link. This rejection is set forth in a prior Office Action, mailed on 03 June 2004.

Claim 30 was rejected under 35 U.S.C. 103(a) over Link in view of Fletcher. This rejection is set forth in a prior Office Action, mailed on 03 June 2004.

(11) Response to Argument

In response to the Applicant's allegation that Link teaches away from using the transmission control protocol, hereinafter TCP, by disclosing the user datagram protocol, hereinafter UDP, without mentioning TCP in any embodiments, the Examiner disagrees. MPEP 2123 states that:

> Disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments.

See also *In re Susi*, 440 F.2d 442, 169 USPQ 423 (CCPA 1971).

Link discloses examples and preferred embodiments using UDP and makes no statement excluding the use of TCP, accordingly Link does not teach away from using TCP.

In response to the Applicant's arguments that UDP and TCP are not interchangeable, the Examiner disagrees. As stated in the Office Action of 03 June 2004, both TCP and UDP are Transport Layer Protocols, Layer 4 of the OSI Model. Transport Layer Protocols establish, maintain, and tear down end-to-end connections and are responsible for error recovery and flow

control. Both TCP and UDP have similar information in their headers, information which includes the source and destination addresses, source and destination ports, and flags. The difference between UDP and TCP is that UDP is a connectionless-oriented protocol while TCP is a connection-oriented protocol. According to http://www.pcwebopaedia.com, a connectionless protocol simply puts the message on the network with the destination address and hopes that it arrives, while a connection-oriented protocol requires a channel to be established between the sender and receiver before any messages are transmitted and verifies that every packet of data sent is received at the receiver's end.

Additionally, several patents disclose that UDP and TCP are interchangeable. For example, U.S. Patent No. 6,625,477 discloses several embodiments where UDP can be used instead of TCP and vice versa at columns 26, line 23 to column 27, line 64. Additionally, U.S. Patent No. 6,621,834 discloses packet delivery guarantees by using TCP instead of UDP in the abstract.

In order to rely on equivalence as a rationale supporting an obviousness rejection, the equivalency must be recognized in the prior art, and cannot be based on applicant's disclosure or the mere fact that the components at issue are functional or mechanical equivalents. See *In re Ruff*, 256 F.2d 590, 118 USPQ 340 (CCPA 1958); see MPEP 2144.06.

Since UDP and TCP are both Transport Layer Protocols, with similar properties, and the fact that several patents indicate that TCP can be used instead of UDP show that the two protocols are equivalents and therefore interchangeable.

Furthermore, there are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons

of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998).

The prior art, U.S. Patent Nos. 6,625,477 and 6,621,834, disclose that UDP and TCP are interchangeable, as well as knowledge available to persons of ordinary skill in the art, Chapters 12 and 13 of **Internetworking with TCP/IP** by Douglas E. Comer, provide motivation to modify the Link reference.

The prior art can be modified or combined to reject claims as prima facie obvious as long as there is a reasonable expectation of success. *In re Merck & Co.*, Inc., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). See MPEP 214.02.

There would be a reasonable expectation of success by swiping UDP out for TCP, because both protocols are used to transmit data using similar properties.

The strongest rationale for combining references is a recognition, expressly or impliedly in the prior art or drawn from a convincing line of reasoning based on established scientific principles or legal precedent, that some advantage or expected beneficial result would have been produced by their combination. *In re Sernaker*, 702 F.2d 989, 994-95, 217 USPQ 1, 5-6 (Fed. Cir. 1983). See MPEP 2144.

One would be motivated to use TCP instead of UDP, because TCP ensures delivery of the data packet. This is disclosed in the abstract of U.S. Patent No. 6,621,834, as well as Chapters 12 and 13 of **Internetworking with TCP/IP** by Douglas E. Comer, especially in Chapter 12 where Comer states:

> The User Datagram Protocol (UDP) provides an unreliable connectionless delivery service using IP to transport messages between machines.

As per the Applicant's allegation that Link would have not included the steps of inserting the first TCP destination port as a second TCP source port in the second data packet; inserting the first TCP source port as a second TCP destination port in the second data packet, the Examiner disagrees. Link teaches a response packet in at least the abstract, figures 4 and 7b, column 5, lines 11-43, and column 6, line 66 to column 7, line 13 which states:

> If the received packet is an initial "ping" packet **82** sent from a remote client (e.g. client1), then step **902** branches to step **904** to handle the packet. For example, as shown in FIG. 7A, client2 receives such a packet **82** from client1, whereby step **902** of client2's pingee thread recognizes the type as being a "ping" and branches to step **904**. At step **904**, the client2's pingee thread modifies the type filed of the packet to a response packet type (field **84d** of FIG. 7B) and puts client2's current local tick timestamp into pingee-pinger bits ***84e*** of the response packet **84** (FIG. 7B). Client2 then send the response packet **84** to client1. Note that client1's timestamp is left intact. Also, it should be noted that it is considered equivalent for client2 to alternatively create its own, new response packet, and copy client1's information into the response packet before sending the response.

The response packet would have to take the first destination port to make as the source port of the response packet, just as it would have to make the first source port the destination port of the response packet.

The process disclosed by Link and the instant patent application is analogous to sending and receiving a letter via the United States Postal Service. A first letter being drawn to the first data packet includes a return address, which includes the sender's name and address being equivalent to the source port and source address of the first packet (sent from client1). The first letter also includes a destination address, which includes a recipient's name and address being equivalent to the destination port and the destination address of the packet (received at client2). The respective addresses are drawn to the source and destination addresses as they give a broader description of where the data is originating and being transmitted. The names of the addressees are drawn to the source and destination ports, respectively, as they give a more detailed description of where the information is being directed. Therefore in order to respond to the first

letter, the original return address becomes the destination address, while the original destination address becomes the return address (sending from client2 back to client1).

In response to the Applicant's allegation that Link does not disclose a first data packet comprising a first time stamp indicating a first time when the first data packet was transmitted and inserting the first time stamp as a second time stamp in the second data packet, wherein the second time stamp is for indicating a second time when the second data packet is transmitted, the Examiner disagrees.

Figure 7a, block 82f, clearly indicates that Link discloses a first data packet comprising a first time stamp indicating a first time when the data packet was transmitted. Link further discusses this in column 6, lines 19-52, specifically stated as:

> At step **802**, for each IP address in the subset, the pinger thread **68** puts a local timestamp into the Pinger – Pinger tick field **82f** of a Ping-type packet **82** (FIG 7A), and sends the packet to the remote machine at that IP address.

Link discloses a first data packet comprising a timestamp indicating a first time when the first data packet was transmitted.

Link discloses inserting the first time stamp as a second time stamp in the second data packet as evident by Figure 7b, block 84f and column 7, lines 1-13, specifically:

> Client2 then sends the response packet **84** to client1. Note that client1's timestamp is left intact. Also, it should be noted that it is considered equivalent for client2 to alternatively create its own, new response packet, and copy client1's information into the response packet before sending the response.

Link also discloses wherein the second time stamp is for indicating a second time when the second data packet is transmitted as shown by figure 7b, block 84e, as well as column 7, lines 1-13, specifically:

> At step **904**, the client2's pingee thread modifies the type field of the paket to a response packet type (field **84d** of FIG. 7B) and puts client2's current local tick timestamp into pingee-pinger bits **84e** of the response packet **84** (FIG. 7B).

Therefore, Link discloses the limitation of inserting the first time stamp as a second time stamp in the second data packet, wherein the second time stamp is for indicating a second time when the second data packet is transmitted as seen by the cited sections above.

With regards to the Applicant's arguments that Link does not disclose a data validity portion for validating the incoming data packet, the Examiner disagrees. The Applicant is correct in pointing out that the Examiner cites figures 1, block 53 and 5, block 80a, in addition to column 4, lines 4-31 and column 6, lines 19-33 as to the teaching of a data validity portion for validating incoming data packets. The cited sections of Link point to a network interface card, otherwise known as a NIC. Network interface cards are used to validate incoming data packets, examples of this can be seen in at least U.S. Patent Nos. 6,141,705 and 6,370,599, therefore Link discloses a data validity portion (in this case the NIC) for validating incoming data packets.

The Examiner agrees that Link does not use the terms field programmable gate array, otherwise known as FPGA, but disagrees with the Applicant's allegation that they are not a part of the Link invention. U.S. Patent Nos. 6,721,872 and 6,064,649 provide at least two examples of field programmable gate arrays being used in network interface cards, a well-known and common practice in the art. Therefore Link discloses various portions are located within field-programmable gate arrays by disclosing the use of computer add-in cards, specifically a network interface card in this case.

As per the Applicant's allegations that Link does not disclose validating the first destination value, the Examiner disagrees. The cited portions of Link disclose adding and removing IP addresses as clients enter and leave the zone lobby. The Examiner quotes the cited section as validating IP addresses by verifying whether a client is still in the zone lobby or not.

Regarding the Applicant's allegations that Link does not teach checksums or TCP flags, the Examiner agrees. As shown above the Examiner has established a prima facie case of obviousness for using TCP instead of UDP. The Examiner contends that the Applicant is claiming features inherent to TCP and cites various sections of "Internetworking with TCP/IP Principles, Protocols, and Architectures" by Douglas E. Comer. Thus, if TCP is being used, checksums and TCP flags become a part of the data packet header as seen in the cited sections of "Internetworking with TCP/IP Principles, Protocols, and Architectures" by Douglas E. Comer. For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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Patent Examiner
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clf
February 9, 2005

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